

Remarks

This paper responds to a final Official Action mailed October 23, 2003.

Claims 1, 3-20 and 24-36 are pending, of which claims 19 and 20 have been cancelled. Applicant notes with appreciation the Examiner's indication that claims 1, 3-18 and 30-34 are allowed. In view of the foregoing amendments, as well as the following remarks, Applicant respectfully submits that the application is in complete condition for allowance and requests reconsideration of the application in this regard.

Rejection of Claims Under 35 U.S.C. § 102

Claims 19 and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,717,370 (Rohrig). Applicant has cancelled these claims to advance examination of the application.

Claim 35 stands rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 6,293,871 (Geislinger). The Examiner contends that Geislinger shows all the elements of the rejected claim. Applicant respectfully disagrees for the reasons set forth below.

Independent claim 35 recites an annular polymer body for a hub that is formed of a composite including a polyamide matrix and a reinforcing filler dispersed within the polyamide matrix. The Examiner contends that Geislinger discloses a polymer body for a hub formed of a composite of a polyamide matrix (3) and a reinforcing filler (4). In contrast to Applicant's claim 35, Geislinger does not expressly disclose a hub formed from a composite of a polyamide matrix and a reinforcing filler. In order for a reference to anticipate the invention in a claim, the reference must teach

each and every element in the precise arrangement set forth in the claim. If the reference fails to teach even one of the claimed elements, the reference does not and cannot anticipate the claimed invention. Because Geislinger fails to disclose the recited composite, Geislinger does not anticipate independent claim 35. For at least these reasons, Applicant respectfully requests that this rejection be withdrawn.

Rejections of Claims Under 35 U.S.C. § 103

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over over U.S. Patent No. 5,024,120 (Andra) in view of U.S. Patent No. 4,899,323 (Fukahori et al.) Independent claim 24 is directed to a torsional vibration damper having a polymer body and an insert radially inward of the polymer body in which the polymer body is formed from a composite including a polyamide matrix and a reinforcing filler dispersed in the polyamide matrix. The Examiner asserts that Andra discloses a polymer body (5) formed of "a polyamide composite (col. 3, lines 57-59; plastic)." The Examiner contends that it would have been obvious to modify the polymer of Andra by adding a reinforcing filler taught by Fukahori et al. Applicant respectfully disagrees for the reasons set forth below.

Applicant submits that the Examiner has not adduced any convincing factual evidence that a polymer body for a hub of a torsional vibration damper formed of a composite including a polyamide matrix and a reinforcing filler dispersed in the polyamide matrix was recognized by persons of ordinary skill in the art at the time of Applicant's invention as beneficial for use in vibration damper hubs. The known use of filled polyamide to construct other structures, such as the anti-seismic device described

in Fukahori et al., does not necessarily provide any suggestion to use filled polyamide to form a vibration damper hub, as recited in Applicant's claim 24. Applicant's specification discusses the problem solved by the claimed invention that arises from deficiencies in conventional polymers used in polymeric vibration damper hubs. See page 3, line 14 to page 4, line 2. The vibration damper hub disclosed in Andra is typical of known hubs formed from such conventional polymers. Applicant's specification clearly presents reasons for selecting a filled polyamide as providing a polymer that is mechanically stable at the ambient, operating temperatures found in the environment of the crankshaft in an internal combustion engine. See page 14, lines 11-17.

Andra and Fukahori et al. totally lack any appreciation of such problems present in vibration damper hubs, which undermines the Examiner's conclusion that the selection of the recited filled polyamide involves a mere design choice involving routine skill in the art. Neither of these references appreciates the need for a vibration damper hub capable of mechanical stability at high temperatures. The mere disclosure of a plastic hub in Andra in combination with the mere disclosure of filler materials for a polymer in Fukahori et al. cannot alone provide a proper motivation or rationale for making the combination proposed by the Examiner. For at least this reason, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness

Assuming, *arguendo*, that one combined Andra and Fukahori et al. as suggested by the Examiner, the resulting damper would not include all the elements of the damper of claim 24. Neither reference explicitly discloses polyamide as the base constituent polymer for constructing the hub nor the use of a composite including a

polyamide matrix and a reinforcing filler dispersed therein. Applicant is not arguing that the plastic disclosed by Andra is not a polymer. Instead, Applicant is arguing that the generic disclosure of plastic in Andra is insufficient, in and of itself, to specifically suggest the use of filled polyamide. Applicant's claim 24, even under the broadest interpretation, cannot be construed to cover all plastics but, instead, only filled polyamide. Therefore, even if the two references were combined, the resulting vibration damper would not include every element of claim 24. For at least this additional reason, Applicant respectfully submits that the Examiner has failed to establish a *prima facie* case of obviousness.

For at least these reasons, Applicant submits that independent claim 24 is patentable and requests that the rejection of claim 24 be withdrawn.

Claims 25-29 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Andra and Fukahori et al. further in view of U.S. Patent No. 5,112,282 (Patterson). The Examiner admits that neither Andra nor Fukahori et al. discloses that the reinforcing filler is glass fibers. The Examiner contends that it would have been obvious to one of ordinary skill in the art to modify the combined teachings of Andra and Fukahori et al. to include a glass filler as purportedly disclosed by Patterson. Applicant respectfully disagrees with the Examiner's contention for the reasons set forth below.

Patterson fails to cure the deficiency of the combination of Andra and Fukahori et al. as Patterson fails to appreciate the problems arising from operation of a torsional vibration damper at the operating temperatures found in an internal combustion engine. Moreover, Patterson does not disclose a polyamide matrix and

glass dispersed in the polyamide matrix. For at least these reasons, Applicant submits that claims 25-29 are patentable and that the rejection of these claims should be withdrawn.

Claim 36 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Geislinger further in view of U.S. Patent No. 5,112,282 (Patterson). The Examiner asserts Patterson cures the deficiency of the combination of Geislinger by disclosing the use of glass, ceramics or carbon as a reinforcing filler. Applicant respectfully disagrees with the Examiner's assertion for the reasons set forth below.

Patterson fails to cure the deficiency of Geislinger as Patterson fails to appreciate the problems arising from operation of a torsional vibration damper at the operating temperatures found in an internal combustion engine. Moreover, Patterson does not disclose a polymer body for a torsional vibration damper formed of a composite of polyamide matrix and glass dispersed in the polyamide matrix. For at least these reasons, Applicant submits that claim 36 is patentable and that the rejection of these claims should be withdrawn.

CONCLUSION

Applicant has made a bona fide effort to respond to each and every requirement set forth in the Office Action. In the event that any issues remain outstanding, the Examiner is invited to contact the undersigned to expedite issuance of this application.

Applicant does not believe fees are due in connection with filing this communication. If, however, additional fees are necessary as a result of this

communication, the Commissioner is hereby authorized to charge any under-payment or fees associated with this communication or credit any over-payment to Deposit Account No. 23-3000.

Respectfully submitted,
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